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FOR GROUND SUPPORT

- 1. SCOPE: THIS SPECIFICATION ESTABLISMES THE REQUIEREMENTS FOR AN OPERATIONAL TEST PROCEDURE FOR TRAILER
  INSTALLED M/6 SETS.
- 2. VISUAL INSPECTION: A COMPLETE VISUAL INSPECTION

  OF THE QUALITY AND WORKMANSHIP OF THE MIGHT SET, CONTROL

  PANEL AND INTERCONNECTING WIRING SHALL BE MADE, TO BE

  FOLLOWED BY MANUAL INSPECTION AS INDICATED IN PARAGRAPH

  3 BELOW.
- 3. MANUAL INSPECTION: THE FOLLOWING INSPECTION STEPS SHALL BE MAPE:
  - Q. SET THE MAIN REGULATED C/B ON THE INTERIOR CONTROL

    PANEL IN THE "OFF" POSITION.
  - 6. APPLY 440 V. 60 CYCLE 3 PHASE POWER TO THE TRAILER POWER
    CONNECTOR. (100 AMP. SERVICE)
    - C. SET THE TRAILER POWER CONNECTOR SWITCH IN THE 'DA"

      POSITION.

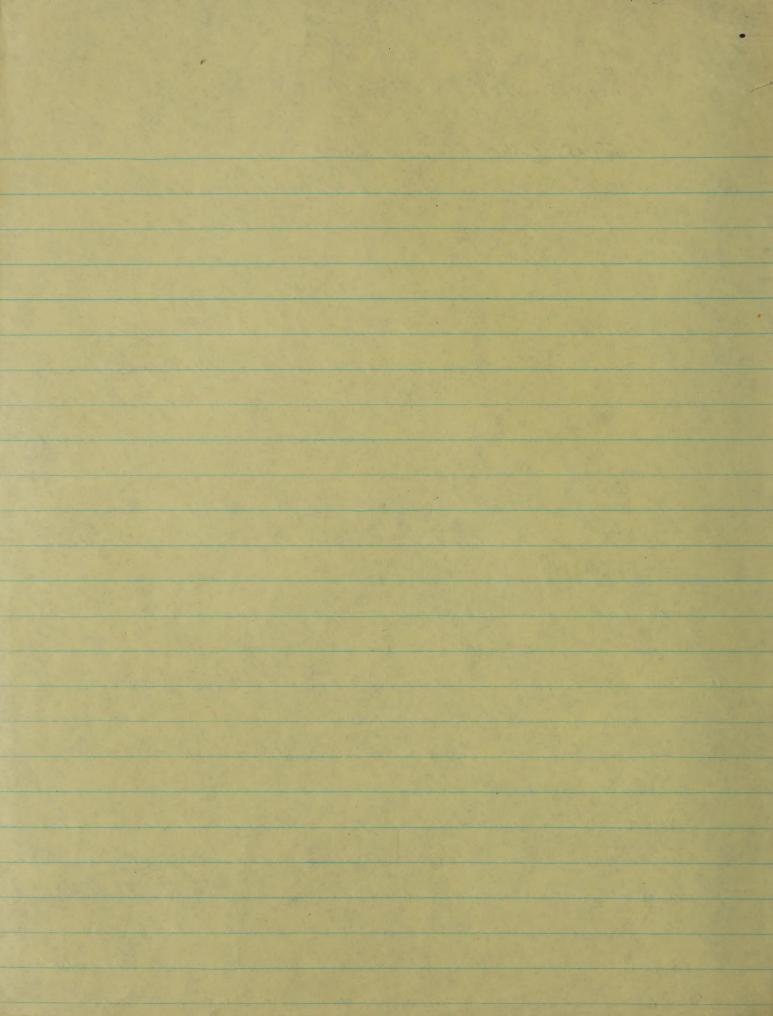
NOTE: WHEN POWER IS APPLIED AN AUDIBLE CLICK WILL

BE HEARD AT THE PHASE SENSING. RELAY ON THE SYNCHRO
NOUS MOTOR STARTER PANEL. IF THIS DOES NOT OCCUR,

THE PHASE CONNECTION FROM THE TIRALER FEED THROUGH

(440 V. INPVT) IS WRONG AND MUST BE SWITCHED AT THAT

POINT BEFORE THE STARTING CIRCUIT WILL OPERATE.



- 3. MANUAL INSPECTION: (CONT)
  - d. PUSH THE LOCAL "START" SWITCH ON THE SYNCHRONOUS MOTOR
    STARTER PANEL. CONTACTOR "M" SHOULD ACTUATE AND MOTOR
    SHALL START TO RUN.
    - e. OBSERVE A 2 TO 10 SECOND DELAY BEFORE CONTRETOFF.
    - F. ALLOW M/G SET TO RUN FOR SMINNTES, THEN PUSH THE 20-CAL "STOR" BUTTON. THE CONTACTORS "M" AND "G" WILL IMMEDIATELY DROP OUT AND THE MOTOR WILL CORST. ROTATE FREELY TO A STOR.
  - Q. WHEN MOTOR HAS STOPTED MOVE TO THE REMOTE START STATION
  - h. WITH THE MOTOR OPERATING, SET THE OVER-VOLTAGE CONTROL POTENTIONETER TO THE CENTER POSITION AND ADJUST
    THE OUTPUT VOLTAGE ADJUSTMENT CONTROL UNTIL 120 V.

    ± 14. 15 READ ACROSS TERMINALS MI AND MO.
- 4. REGULATOR CHECK: CHECKS WITH A CATHODE PRAY OSCI-
  - Q. WITH THE OSCILLOSCOPE LOCKED ON A 60 CYCLE SWEEP AND

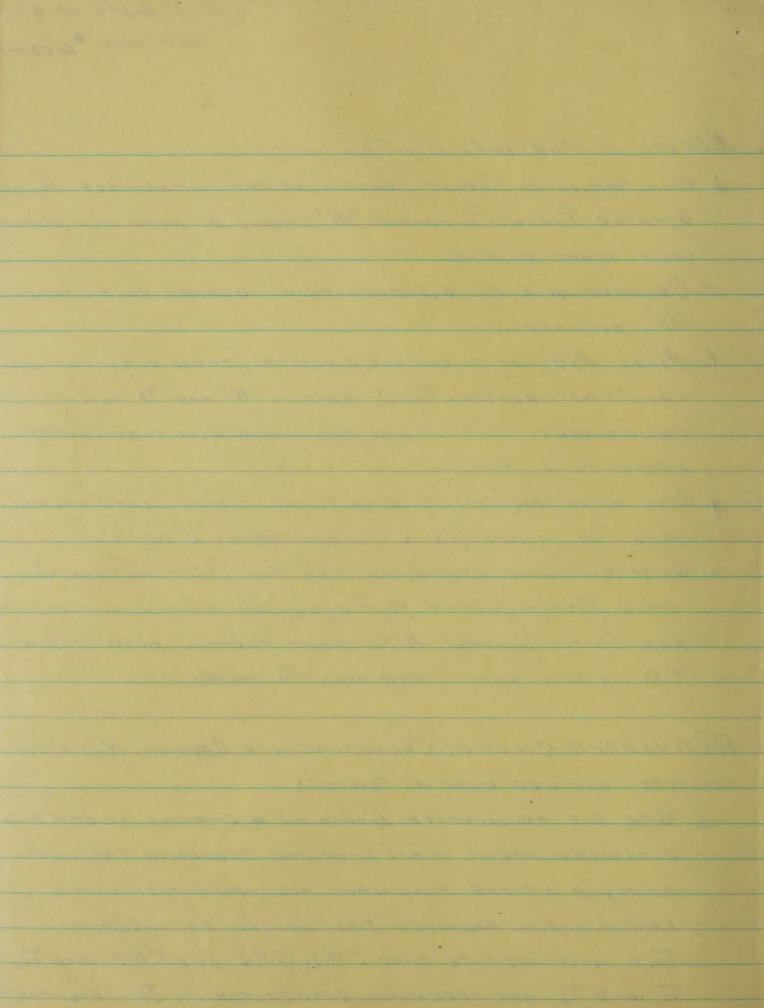
    CONNECTED ACROSS I AND 2 OF THE REGULATOR TERMINAL

    BOARD, A 3 PHASE FULL WAVE RECTIFIER OUTPUT OF 6

    FAIRLY WELL BALANCED PIPS SHOULD BE OBSERVED.

    THIS WILL INDICATE THAT (R), CR2 AND CR3, AND TI,

    T2 AND T3 ARE OPERATING SATISFACTORILY. TE LESS THAN



## 4. PEGULATOR CHECK: (CONT.)

69195 ARE VISIBLE IT MERNS ONE OF THE REHOTORS

OR ONE OF THE SELENIUMS ARE NOT OPERATING AND

FURTHER CHECKING WITH THE SCOPE ACROSS INDIVIDUAL

COMPONENTS SHALL BE MADE TO DETERMINE WHICH ONE

15 AT FAULT. SEE FIG.

- b. PLACE THE SCOPE ACROSS THE OUTSIDE OF THE RECTIFIENT

  CR6. THIS WILL INDICATE THE OUTPUT OF THE DRIVER STHEE

  T4; 2 PIPS SHOULD APPEAR INDICATING FULL WAVE SINGLE

  PHASE RECTIFICATION AND SHOULD SHOW THAT THE

  MAGNETIC AMPLIFIENT IS PINING FOR PART OF EACH

  HALF CYCLE. TO ONE OF THESE IS MISSING USE THE

  SCOPE ACROSS INDIVIDUAL COMPONENTS TO FIND THE

  DEFECTIVE PART. SEE FIG. 2.
  - C. PLACE THE SCOPE ACROSS THE PLUS AND MINUS OUTPUTS

    OF CR7 AND CR8. THIS SHOULD INDICATE 6 PIPS

    FOR THE FULL WAVE 3 PHASE BECTIFIER OUTPUT. IF

    ANY OF THESE PIPS ARE MISSING IT WILL INDICATE

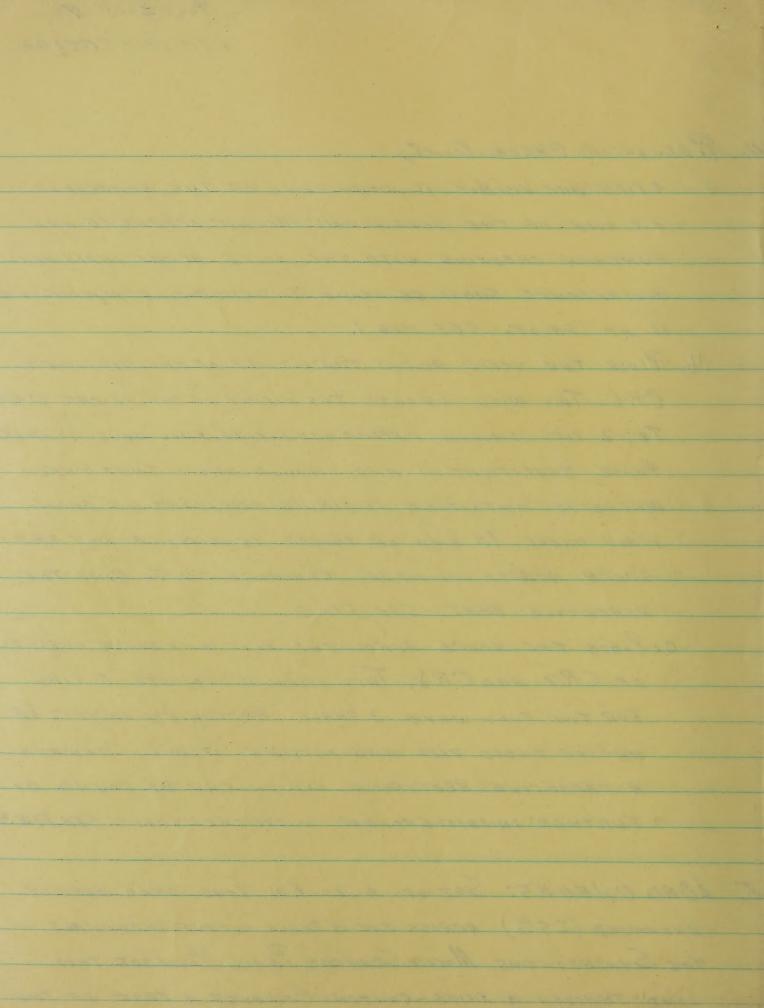
    A DEFECTIVE RECTIFIER WHICH CAN BE FOUND BY

    FURTHER INVESTIGATION WITH THE SCOPE. SEE FIG. 3.
- 5. LOAD CHECKS: SET UP A 20 KW LOAD BANK EVENLY

  BALANCED (±5%) ACROSS THE 3 PHASE OUTPUT TERMINALS ON

  THE SYNCHRONOUS MOTOR STARTER PANEL. CONNECT THIS

  LOAD THROUGH A KNIFE-SWITCH. CONDUCT A TEST OF THE

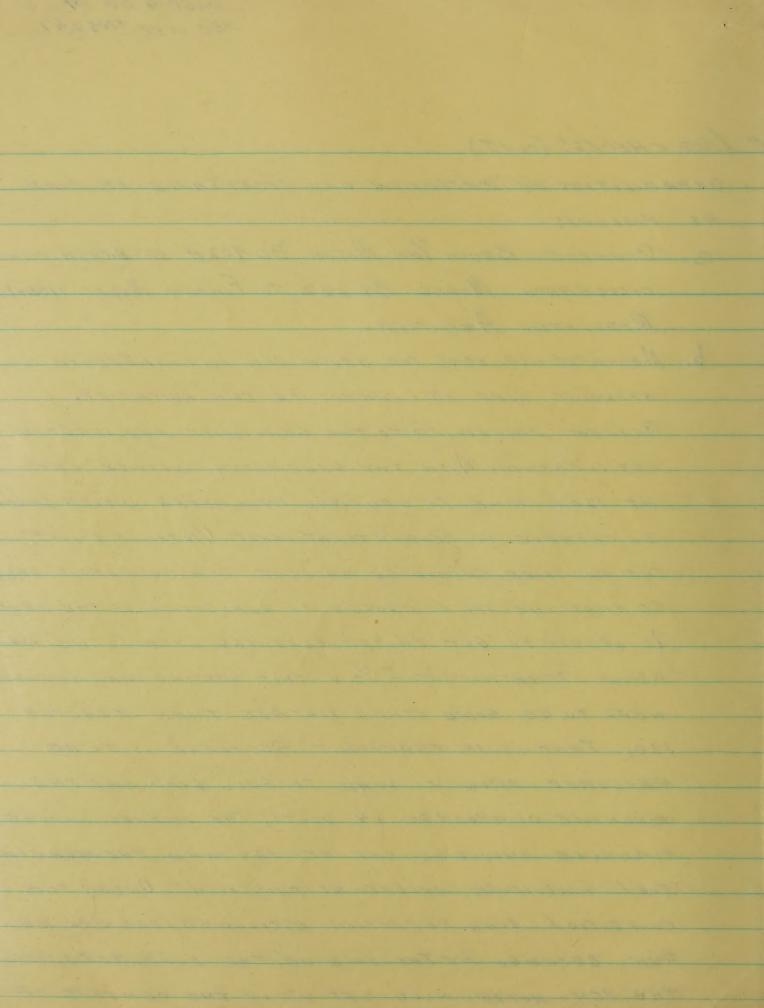


- 5 LOAD CHECKS: (CONT.)
  - CAPABILITIES OF RETECTION AND ACCEPTANCE OF LOAD

    AS FOLLOWS:
    - Q. CONNECT BRUSH PEN MOTOR BL 902A OF BRUSH 05-CILLOGIRAPH MODEL BLZZZ TO FINCOR MODEL 1102-1 MODULATION AMPLIFIER.
    - b. MECHANICALLY ZERO THE BRUSH PEN MOTOR BEFORE APPLYING LOAD OR CONNECTING THE AMPLIFICA. CONNECT AMPLIPIES TO THE GENESATOR AND BRUSH OSCILLOGRAPH. WITH THE GENEIGHTOR VOLTAGE SET AT 120 V. LIKE TO NEUTRAL BY A METER WHICH SHALL BECAPABLE OF READING TO AT LEAST 1/10 TH. OF A YOUT, THE AMPLIER SHOULD BE BROUGHT TO A COMPLETE NULL SO THAT THE 120 V. CAUSES NO DISPLIENTION OF THE BRUSH IN ORDER TO GET PROPER READINGS WITHIN THE NA-RROW OPERATION OF - 1/2 V THIS SETTING MAY OF TIMES WEED TO BE SOME OTHER YOUTAGE THAN EXACTLY 120, THAT IS IF TRANSIENT RESPONSE IS TO BE MEASURED FROM NO LOAD TO FULL LOAD AND THE MACHINE COMPOUNDS . 4 YOUTS, THE VOLTAGE ON THE MACHINE SHOULD BE SET AT 120 AND THE MODULA-TION AMPLIFIER NULLED AT THIS POINT. UNDER THIS CONDITION LOAD REFECTION OSCILLO GRAPHS CAN BE

RUN BECAUSE AT THE END OF THE LOAD PREVECTION

THE PEN MOTOR WILL SET UP IN THE CENTER OF



5 LOAD CHECKS: FONT.)

OF THE PAPER. FOR LOAD APPLICATION MERSURSMENTS

THE MODULATION AMPLIFIER SHALL BE REBEROED

WITH THE GENERATOR LOADED. BY FOLLOWING THIS

PROCEDURE, THE ± 1/2 V. SWING OF THE BRUSH PEN

WILL BE EQUALLY DIVIDED ON THE FINAL SETTING

POINT OF THE GENERATOR, ALLOWING THE FINAL N

SWINGS, OF THE GENERATOR TO FRALL EQUALLY

WITHIN THE CHLIBRATED PORTION OF THE VOLTAGE

SCALE.

NOTE: IN CALIBRATING THIS INSTRUMENT RIO IS

USED TOGET THE GAIN SOTHAT APPROXIMATELY. 5

VOLTS WILL PRODUCE APPROXIMATELY 5 MILLI
METER DEFLECTION ON THE BIRUSH. IF THIS SNING

IN EITHER PIRECTION IS NOT EXACTLY THE

SAME DISTANCE IT IS NOT PETRIMENTAL TO

READING FINAL RESULTS AS LONG AS THE CA
LIBITATION POINT IS THE SAME AS THAT SPE
CIFIED FOR THE GENERATOR BEING TESTED,

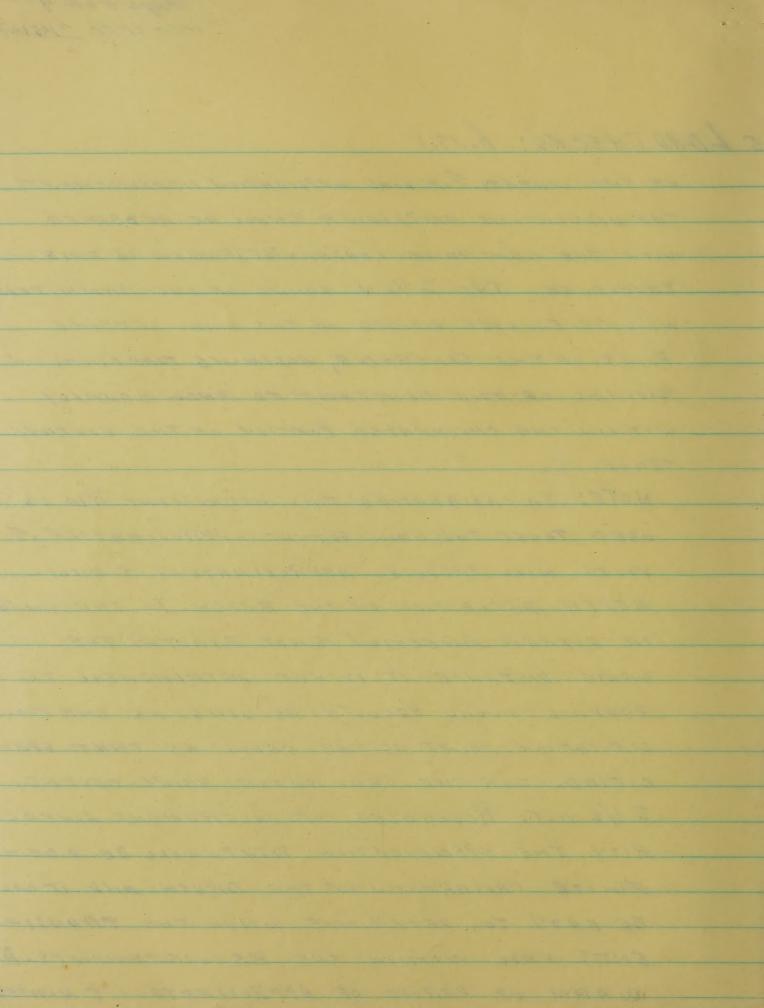
T 1/2 YOLT. REGARDLES OF INSTRUMENT LINEAL

RITY THE SPECIFICATION POINT WILL BE A DIS
FINITE CALIBRATION OF THE BIRUSH AND IT WILL

BE EASY TO DETERMINE WHEN THE FRANSI-S

ENTS FALL WITHIN THE REQUIEREMENTS. A

WARM UP PERIOD OF APPROXIMATELY 5 MINUTES



## 5. LOAD CHECKS: (colf)

SHOULD BE HILLWED BEFORE FINAL ADJUSTANCE

- C. APPLY THE 20 KW, LOAD INSTRUTANEOUSEN 5 TIMES.
  - (1) STEADY STATE VOLTAGE
  - (2) RESPONSE BACK TO RESUSATION
  - (3) VOLTFOR EXCUIPSION.

## 6. RESULTS:

- a. STEADY STATE VOLTAGE SHOULD REASON WITHIN I.3 V.
- B. AFTER APPLICATION OF MEDERATION OF LORD, DIVER
  SHALL RETURN TO 120 V. T /2 VOLT IN 10 CYCLES
- C. Excursion SMALL NOT BE MORE THAN 5 V. PMS.

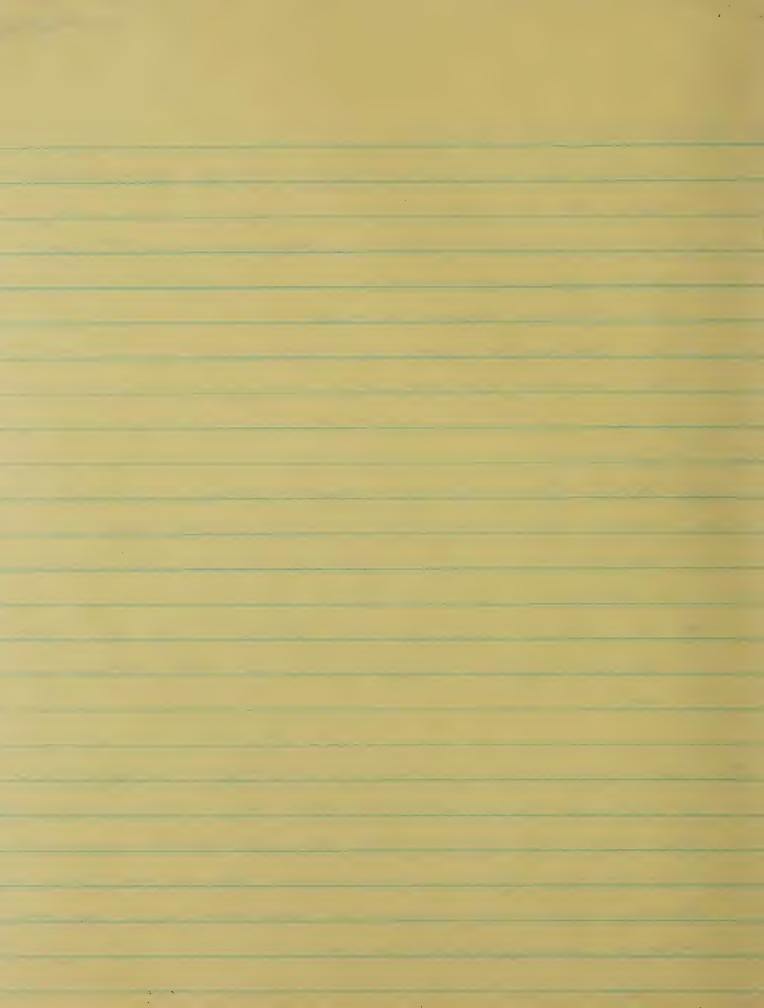
  DURING LONDING AND UNLORDING. USE UT VM ON

  THIS.
- 7. LOAD UNBALANCE CHECK: REPERT PARASPANA,

  O., b, C AND PARAGRAPH 5 EXCEPT THAT INSTEAD OF 20 KW

  BHARNCED LOAD APPLY 10 KW TO ONE PHASE LENVING

  THE OTHER PHASES AT NO. LOAD. RESULTS 
  (SHOULD MEET THE ABOVE PARAMETERS ALSO UNDER THESE UNBALANCED CONDITIONS).



- 8. REGULATOR PROTECTION CHECKOUT:
  - Q. OVER VOLTAGE: SET THE VOLTAGE CONTIROL POPEN 
    TIOMETER TO FULL DECREPSE POSITION AND THE

    OVER VOLTAGE CONTROL TO #1 POSITION, (125 V).

    ROTATE THE VOLTAGE CONTROL POTENTIONETER TO

    FULL INGREASE VOLTAGE. PESULT: THE MOTOR WILL

    SHUT DOWN.
  - b. SET THE VOLTAGE CONTROL POTENTIONETER TO THE

    FULL DECREASE POSITION AND THE OVER VOLTAGE

    CONTROL TO THE \$2 POSITION. (135 V). ROTATE THE

    VOLTAGE CONTROL POTENTIONETER TO FULL INCREASE

    VOLTAGE. RESULT: THE MOTOR WILL SHUT DOWN.
  - C. SET THE VOLTAGE CONTROL POTENTIOMETER TO THE

    FULL DECREBSE POSITION AND THE OVER YOUTHGE CONT

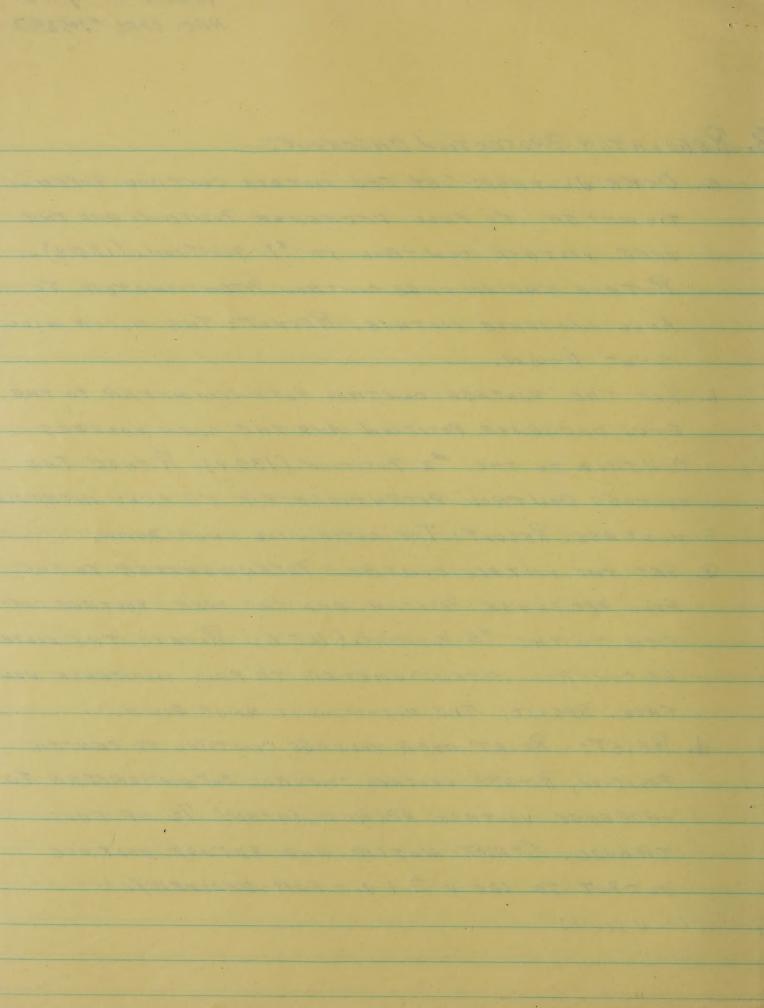
    TROL TO THE "3 POSITION. (145 V.). ROTATE THE VOLTA
    GE CONTROL POTENTIOMETER TO FULL INCIRERSE VOL
    THGE. RESULT: THE MOTOR WILL SHUT DOWN.
  - d. RESET: RESET OVER VOLTAGE CONTROL TO CENTER

    POSITION, ROTATE VOLTAGE CONTROL POTENTIOMETER TO

    INCREASE VOLTAGE APPROXIMATELY 1/2 OF FULL

    TRAVEL. START MOTOR AND ADJUST VOLTAGE

    OUTPUT TO 120 V ± 1 V. FOR DELIVERY.



9. CONCLUSION: IF THE UNIT MEETS THE PARA
METERS DUTLINED ABOVE IT IS CONSIDERED TO

MEET THE OPERATIONAL REQUIREMENTS OF THIS

SPECIFICATION. ALL TESTS ARE TO BE RUN AT NOISMAL

CONDITIONS OF WEATHER AND ATMOSPHERE.

